SANYO

SANYO
STEREO RECEIVER
DCX 2000L
SERVICE MANUAL

SPECIFICATIONS

AUDIO SECTION

Continuous Power Output:	
Amplifier load at 8 ohms (1KHz, each channel driven)	17W/17W
Amplifier load at 8 ohms (1KHz, both channel driven)	15W/15W
Power Output in the range of 20 to 20KHz	
Amplifer laod at 8 ohms (Both channel driven)	13W/13W
Harmonic Distortion:	Less than 0.8% (Continuous Power)
Intermodulation Distortion:	Less than 0.8% (Continuous Power)
Power Bandwidth:	20 to 40KHz (both channel driven)
Frequency Response:	20 to 45KHz ±3dB (AUX INPUT)
Matching Speaker Impedance:	4 to 16 ohms

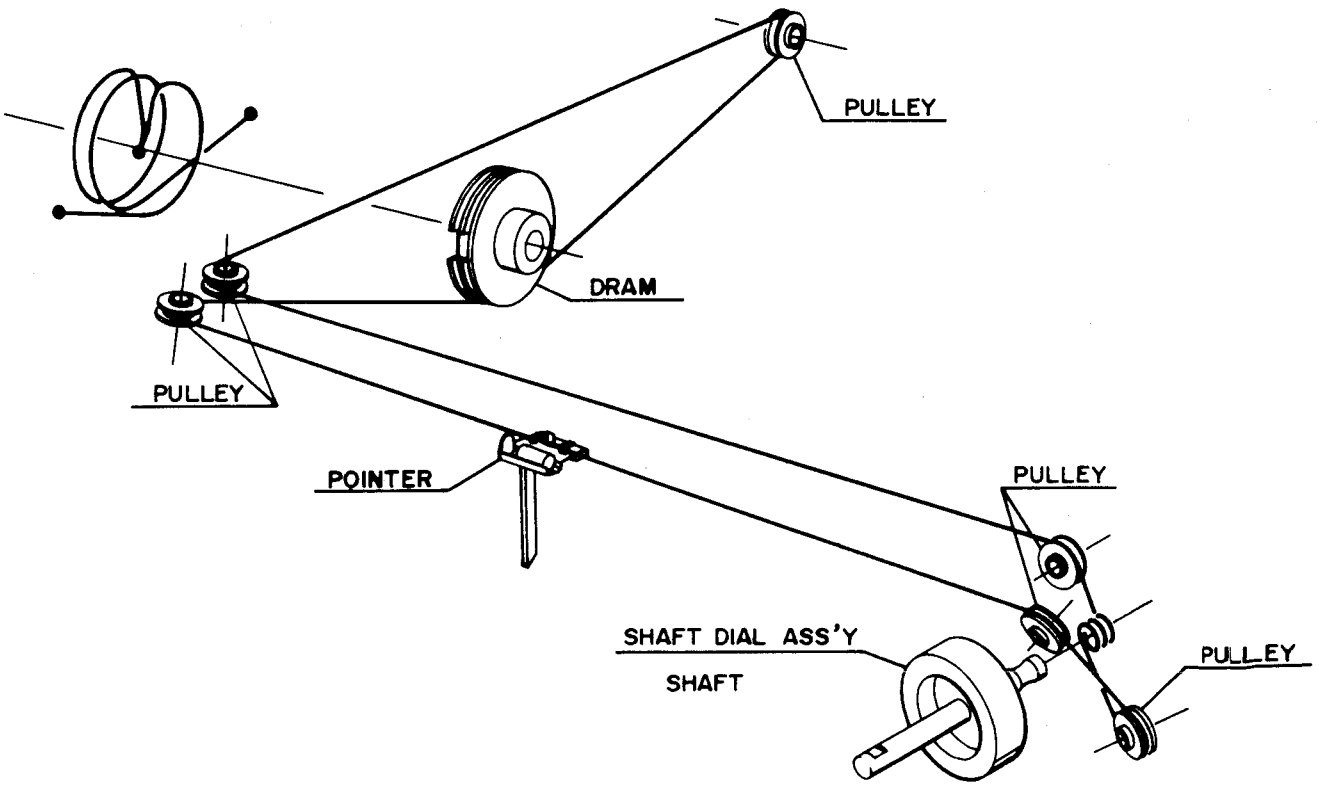
PRE-AMPLIFIER SECTION

Input Sensivitity/Impedance: (1KHZ, at rated power)	PHONO	: 2.5mV/50K ohms
	AUX	: 180mV/50K ohms
	TAPE (RCA, DIN)	: 180mV/50K ohms
	MIC	: 2.5mV/50K ohms
Signal to Noise:	PHONO (IHF, B network)	More than 65 dB
	MIC (IHF, B network)	More than 65 dB
	AUX	More than 80 dB
	TAPE (IHF, B network)	More than 80 dB
Output Level/Impedance:	TAPE REC RCA	: 180mV/1K ohms
	TAPE REC DIN	: 35mV/35K ohms Terminate
Tone Control:		
Bass Control:	100Hz, ±10dB	
Trable Contorl:	10KHz, ±10dB	
Filter Control:		
High Filter:	10 KHz (-6dB/oct.)	
Loudness Control: (Power output level at.—30dB)	100Hz, +8dB 10KHz, +3dB	

MISCELLANEOUS

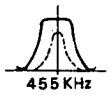
Power Requirements:	110V/220V 50Hz (SWITCHABLE)	
Dimensions (overall):	Width	455 mm
	Height	148 mm
	Depth	340 mm
Weight: (Approx.)	Without Package	8.8 Kg

DIAL CORD STRING



ADJUSTMENT

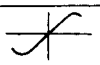
AM ADJUSTMENT

Step	Adjusting circuit	Connections		SG. frequency	Position of tuning dial	Adjustment	V.T.V.M. Oscilloscope
		Input	Output				
1	IF	Connect sweep generator to VC4.	Connect oscilloscope to test point TP7.	455 KHz	Near max. capacity of VC. at position with no unrequred signal.	AM 1st 9-20970 (Red)	 455 KHz
2	MW	Connect standard loop antenna to output terminals of SG. Place reciever 2 feet from loop antenna.	Connect V.T.V.M. to speaker terminals.	600 KHz (400Hz 30% modulation)	600 KHz	MW OSC 9-20690	Max.
3				1400 KHz (400Hz 30% modulation	1400 KHz	TC 8	
4	LW			150 KHz (400Hz 30% modulation)	150 KHz	LW OSC 9-20720	Max.
5				350 KHz (400Hz 30% modulation)	350 KHz	TC 7, TC 9	
6	Repeat adjustments.						

PREPARE

1. Variable capacitor completely closed.
2. Set the dial pointer to very left line dial scale.
3. Connect sweep generator. S.G, V.T.V.M. and oscilloscope.

FM ADJUSTMENT

Step	Adjusting circuit	Connections		SG frequency	Position of tuning dial	Adjustment	V.T.V.M. Oscilloscope
		Input	Output				
1	IF	Connect sweep generator to test point TP1 through 0.01μF	Connect oscilloscope to test point TP2.	10.7 MHz (none modulation)	Near max. capacity of VC. at position with no unrequired signal.	FM 1st 9-21040 (Violet) 9-21050 (Orange) FM 2nd 9-21080 9-21090 FM 3rd 9-21060 9-21070	10.7 MHz
2	Ratio Det.		Connect oscilloscope to test point TP3.			FM DET 9-20850 (Pink) 9-20860 (Blue)	 10.7 MHz
3	RF	Connect FM SG. to FM aerial terminals.	Connect V.T.V.M. to speaker terminal.	90 MHz (400 Hz, 30% modulation)	90 MHz	FM aerial 9-21090 FM OSC 9-20460 FM RF 9-20330	Max.
4				106 MHz (400 Hz, 30% modulation)	106 MHz	TC1 TC2 TC3	Max.
5	Repeat adjustments.						

PREPARE

1. Variable capacitor completely closed.
2. Set the dial pointer to very left line of dial scale.
3. Connect sweep generator, FM SG, V.T.V.M. and oscilloscope. FM aerial input impedance is 300 ohm.
4. Function switch to "FM"
5. Use a screwdriver with plastic grip for all adjustments.

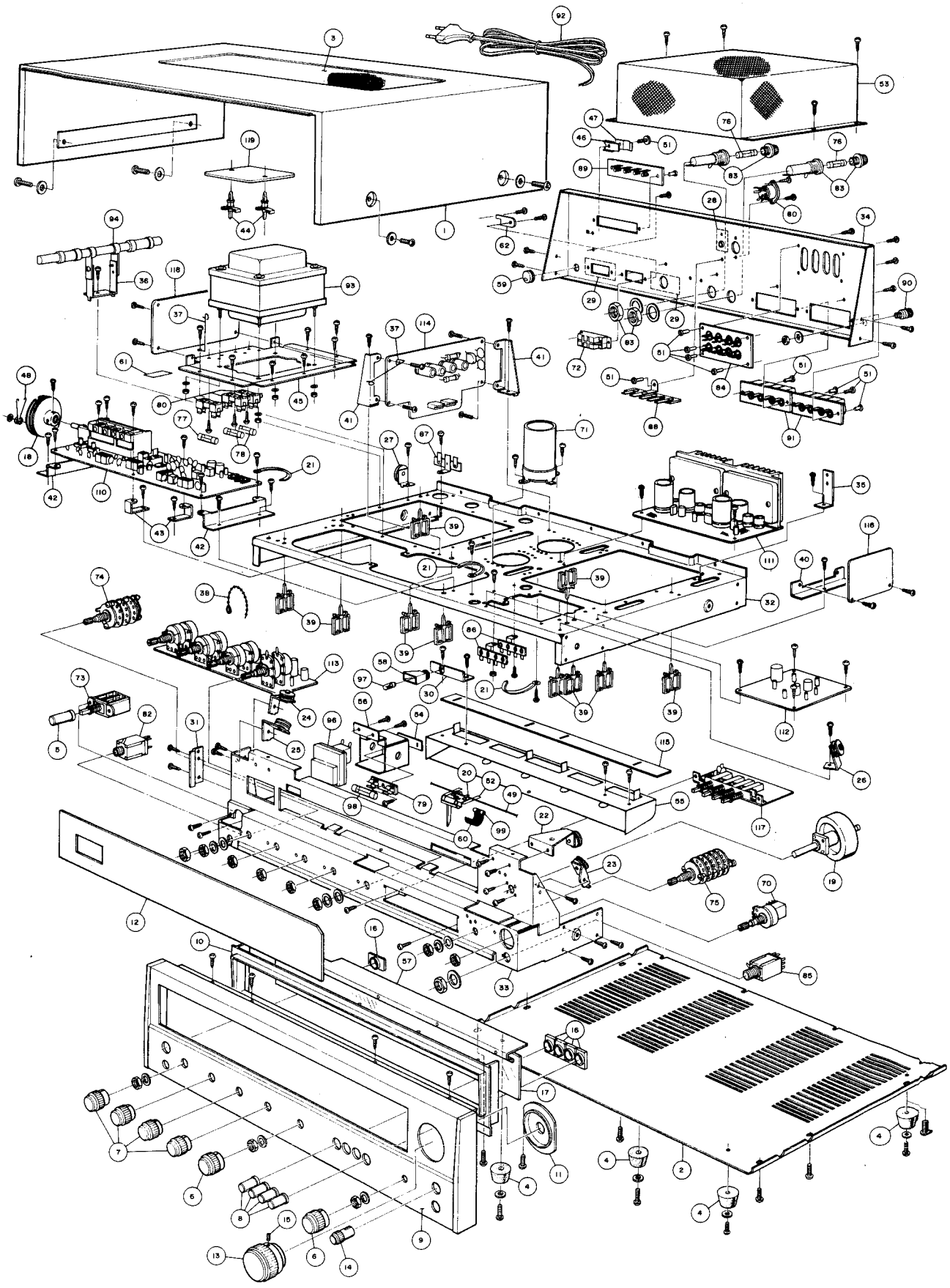
FM MPX ADJUSTMENT

Step	Adjusting circuit	Connections		Position of tuning dial	Adjustment	V.T.V.M.
		Input	Output			
1	SCA signal filter (67 KHz)	Add SCA signal to FM stereo SG. and connect to FM aerial. terminals. FM stereo signal OFF.	Connect V.T.V.M. to test point TP4.	Near max. capacity of VC. at position with no unrequired signal.	67 KHz 9-20142 (Red)	Min.
2	38 KHz	Connect FM stereo SG to FM aerial terminals. 19 KHz signal ON. Main channel, sub channel signal ON. Add 1000 Hz signal from L Ch.	Connect V.T.V.M. to test point TP6.		38 KHz 9-20210 (Black) 9-20222 (White)	Max.
3	FM stereo signal separation		Connect V.T.V.M. to R speaker terminal.			
4		Connect FM stereo SG to FM aerial terminals. 19 KHz signal ON. Main channel, sub channel signal ON. Add 1000 Hz signal from R Ch.	Connect V.T.V.M. to L speaker terminal.		38 KHz 9-20210 (Black)	Min
5	Repeat steps 3 ~ 4. Set at position with max. channel separation.					

PREPARE

1. Variable capacitor completely closed.
2. Connect FM stereo SG. and V.T.V.M.
3. Function switch to "FM AUTO".
4. Use a screwdriver with plastic grip for all adjustments.

EXPLODED VIEW



PARTS LIST

Key No.	Part No.	Description	Q'ty
PACKING			
	4 2449 20230	Aerial FM	1
	131 6 1139 43008	Box, Corrugate exp.	1
	131 6 2119 01361	Bag, Polyethylene exp.	1
	131 6 2719 10600	Bag, Fan	1
	131 6 3009 17640	Pad	2
	131 6 4119 31002	Explanatory Booklet	1
	131 6 4559 10100	Manufacturing No.	1
CABINET			
1	131 2 1101 22501	Cabinet	1
2	131 2 1105 14000	Plate, Bottom	1
3	131 2 1312 11001	Grill	1
4	131 2 1801 13100	Leg, Rubber	4
	131 2 4203 84204	Washer, 4.2 x 14 x 1	4
		Screw, Pan Hd. 4 x 10	6
		Screw, Pan Hd. 4 x 16	4
		Screw, Truss Hd. 4 x 16	4
		Screw, Pan Hd. tapping 3 x 6	4
APPEARANCE			
5	131 0 1001 23300	Knob assy, Power	1
8	131 0 1001 28002	Knob assy, Push	6
6	131 0 1001 23500	Knob assy, Volume, Function	2
7	131 0 1001 23600	Knob assy, SP, Balance, Bass, Treble	4
9	131 0 1016 16202	Panel Decorate assy	1
10	131 2 1116 11700	Frame	1
11	131 2 1116 11800	Frame	1
12	131 2 1201 22602	Plate dial	1
13	131 2 1601 26400	Knob, Tuning	1
14	131 2 1601 26900	Knob, Mic.	1
15	131 2 4201 12400	Screw, Tuning knob	1
16	131 2 6111 12600	Bushing	5
17	131 2 6308 15000	Filter	1
CHASSIS			
18	131 0 3002 10800	Drum assy	1
19	131 0 3003 15400	Shaft dial assy	1
20	131 0 3011 13600	Pointer assy	1
21	131 0 3016 10400	Cramp wire assy	3
22	131 0 3020 02000	Pully assy	1
23	131 0 3020 02100	Pully assy	1
24	131 0 3020 02200	Pully assy	1
25	131 0 3020 02300	Pully assy	1
26	131 0 3020 02400	Pully assy	1
27	131 0 3020 05300	Pully assy	1
28	131 2 1110 12100	Plate decorate	1
29	131 2 1110 16100	Plate decorate	2
30	131 2 3101 19700	Metal mount, FM stereo ind.	1
31	131 2 3101 19900	Metal mount, Plate dial	1
32	131 2 3301 18800	Chassis	1
33	131 2 3305 15900	Panel, Front	1
34	131 2 3306 15502	Panel, Rear	1
37	131 2 3608 11200	Cramp wire	2
38	131 2 3608 11700	Cramp wire	3
39	131 2 3608 11701	Cramp wire	9
40	131 2 3614 13100	Mount, Mic Amp. P.C.B.	1
41	131 2 3614 13300	Mount, Power P.C.B.	2
42	131 2 3614 15000	Mount, IF P.C.B.	2
43	131 2 3614 15100	Mount, IF P.C.B.	2
45	131 2 3617 14100	Metal mount, Trans	1
46	131 2 3621 00400	Metal, Cramp wire	1
47	131 2 3621 00500	Metal, Cramp wire	1
48	131 2 4111 00300	Rope spring	1
49	131 2 4112 10300	Rope	1
51	131 2 4221 00100	Rivet	11
52	131 2 5205 12000	Cushion	1
53	131 2 6103 13000	Cover, Shield	1
54	131 2 6107 13900	Plate sever, Meter lamp holder	1
55	131 2 6110 19800	Shelter light, Dial	1
56	131 2 6110 19900	Shelter light, Tuning meter	1
57	131 2 6110 20000	Shelter light, Frame up	1

Key No.	Part No.	Description	Q'ty
CHASSIS			
58	131 2 6110 20100	Shelter light, FM stereo ind.	1
59	131 2 6111 11300	Bushing, Power cord	1
60	131 2 6308 12400	Filter, Pointer lamp	1
35	131 2 3603 10700	Metal mount, Antenna	1
36	131 2 3603 12900	Metal mount, Antenna	1
44	131 2 3614 16800	Mount, RF AMP PCB	2
50	131 2 4201 12701	Screw	1
61	131 2 7103 20300	Label	1
62	131 2 7104 00101	Plate Pad switch	1
ELECTRICAL PARTS			
70	4 2229 23490	VR B-10K Mic VR	1
71	4 2239 20590	Elect Capacitor 3300μF 50V C901	1
72	4 2319 21530	Switch, Power select	1
73	4 2319 23090	Swtich, Push, power	1
74	4 2319 23110	Switch rotary, SP select	1
75	4 2319 23770	Switch rotary, Function	1
76	4 2349 20010	Fuse 1.5A, Protector	2
77	4 2349 20520	Fuse 1A	1
78	4 2349 20570	Fuse 2.5A Secondary	2
79	4 2359 20160	Fuse Holder, Tuning meter lamp	1
80	4 2359 20190	Socket 5P DIN	1
81	4 2359 21020	Socket, Secondary	3
82	4 2359 21080	Jack, Headphone	1
83	4 2359 21110	Fuse Holder	1
84	4 2359 21260	Socket phono 8P, input terminal	1
85	4 2359 21670	Jack, Mic	1
86	4 2379 20120	Terminal base	2
87	4 2379 20140	Terminal lug 2P	1
88	4 2379 20410	Terminal lug 1-4PL	1
89	4 2379 21050	Terminal antenna	1
90	4 2379 21060	Terminal G	1
91	4 2379 21210	Terminal SP 4P	2
92	4 2439 20521	Power cord	1
93	4 2519 23260	Power Trans, 110-220	1
94	4 2579 21002	Bar ant AM(LW, MW) L901	1
95	4 2659 20190	Multiplex coil L903	1
96	4 5119 20340	Meter, Tuning	1
97	4 6129 20133	Pilot lamp, stereo ind	1
98	4 6129 20280	Pilot lamp, Tuning meter	1
99	4 6129 20360	Pilot lamp, Dial pointer	1
		CAPACITOR	
C907		Mylar 0.068μF 50V ±20%	1
C902,C903		MP 0.01μF 250V ±20%	2
C904,905		Ceramic 0.04μF 50V P+100% -0%	2
		RESISTORS	
R901,907		Carbon 820 ohm 1/4W ±10%	1
R902		Carbon 1K ohm 1/4W ±10%	2
R903,		Carbon 18K ohm 1/4W ±10%	1
R910,911		Carbon 47K ohm 1/4W ±10%	2
R908,909		Carbon 100K ohm 1/4W ±10%	2
		Carbon 330K ohm 1/4W ±10%	2

NOTES: 1. Part orders must contain Model Number, Part Number and Description.
2. Unless otherwise noted, component parts indicated by parentheses in the comumn Q'ty are not available.
3. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

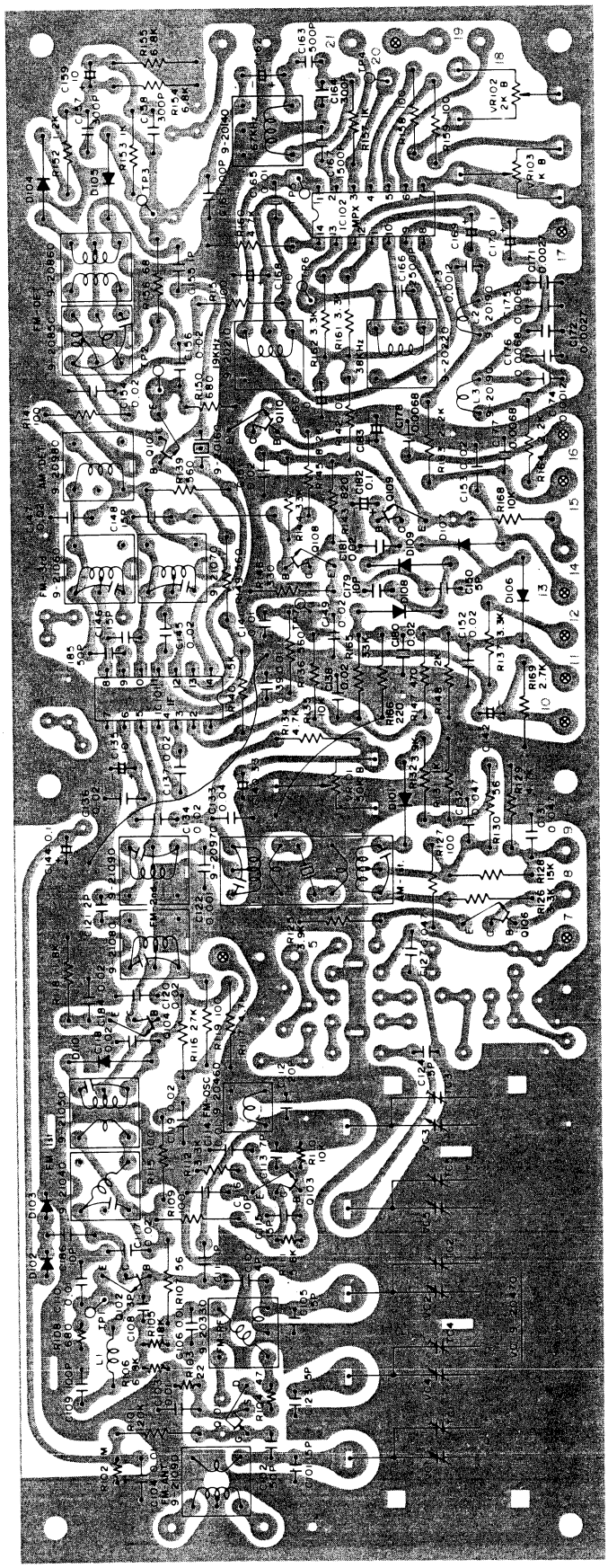
PARTS LIST

Key No.	Part No.	Description	Q'ty
RF. IF. MPX P.C.B. ASSY			
110	131 0 4001 40306	RF, IF, MPX. P.C.B. assy	1
VR103	4 2229 22950	Variable resistor, 1K-B	1
VR101	4 2229 23450	Potensiometer B-50K	1
VR102	4 2229 23580	Variable resistor, 2K-B	1
	4 2249 20490	Variable capacitor	1
	4 2279 20160	Ceramic filter 10.7MHz	1
	4 2379 21120	Terminal, Test point	8
L1	4 2539 20180	IF Trap	1
	4 2569 20850	Voice IF Trans	1
	4 2569 20860	Voice IF Trans	1
	4 2569 20970	IF trans, AM 1st.	1
	4 2569 20980	IF trans, AM 2nd.	1
	4 2569 21040	IF trans, FM 1st.	1
	4 2569 21050	IF trans, FM 1st.	1
	4 2569 21060	IF trans, FM 3rd.	1
	4 2569 21070	IF trans, FM 3rd.	1
	4 2569 21080	IF trans, FM 2nd.	1
	4 2569 21090	IF trans, FM 2nd.	1
	4 2579 21090	Aerial coil, FM	1
	4 2589 20460	OSC coil, FM	1
	4 2599 20330	RF coil, FM	1
	4 2659 20140	Multiplex coil, 67kHz	1
L2,3	4 2659 20190	Multiplex coil	2
	4 2659 20210	Multiplex coil, 19kHz	1
	4 2659 20220	Multiplex coil, 38kHz	1
		SEMICONDUCTORS	
Q102	203 5 4510 66840	Transistor 2SC 668 (N-D-RF) or (N-E-RF)	1
Q109,110	203 5 5100 53740	Transistor 2SC 537 (D) or (E)	2
Q106	203 5 5510 92940	Transistor 2SC 929 (D) or (E)	1
Q104,108	203 5 5510 93040	Transistor 2SC 930 (N-D)	2
Q103,107	203 5 5510 93050	Transistor 2SC 930 (E)	2
Q101	203 5 6500 04160	Transistor 2SK 41 (F)	1
D101,102, 103,104, 105,106, 107,108, 109	202 5 9110 18820	Diode 1S188 (FMI)	9
D110	205 5 9040 44210	Diode DS-442	1
IC101	206 5 0081 20122	IC LA1201 (B-H)	1
IC102	206 5 0663 30010	IC LA3300	1
		CAPACITORS	
C111,155		Ceramic 1PF ±0.25pF 50V	2
C121		Ceramic 2PF ±0.25pF 50V	1
C108		Ceramic 3PF ±0.25pF 50V	1
C107		Ceramic 4PF ±0.25pF 50V	1
C123		Ceramic 5PF ±5% 50V	1
C113		Ceramic 7PF ±0.25pF 50V	1
C150		Ceramic 10PF ±0.25pF 50V	1
C116,186, 179		Ceramic 10PF ±5% 50V	3
C115,146, 148		Ceramic 15PF ±5% 50V	3
C124		Ceramic 5PF ±0.25PF 50V	1
C101,105		Ceramic 15PF ±10% 50V	2
C102,185		Ceramic 50PF ±10% 50V	2
C109,161		Ceramic 100PF ±10% 50V	2
C157,158		Ceramic 300PF ±10% 50V	2
C122		Mylar 0.001μF ±20% 50V	1
C173,174		Mylar 0.0012μF ±20% 50V	2
C171,172		Mylar 0.0027μF ±20% 50V	2
C175,176		Mylar 0.0068μF ±20% 50V	2
C139,141, C177,178, C131,132		Mylar 0.01μF ±20% 50V Mylar 0.0068μF ±20% 50V Mylar 0.047μF ±20% 50V	2 2 2
C112		Ceramic 25PF ±5% 50V	1
C183		Electrolytic 1μF 10V	1
C135,159, 160,168		Electrolytic 10μF 10V	4

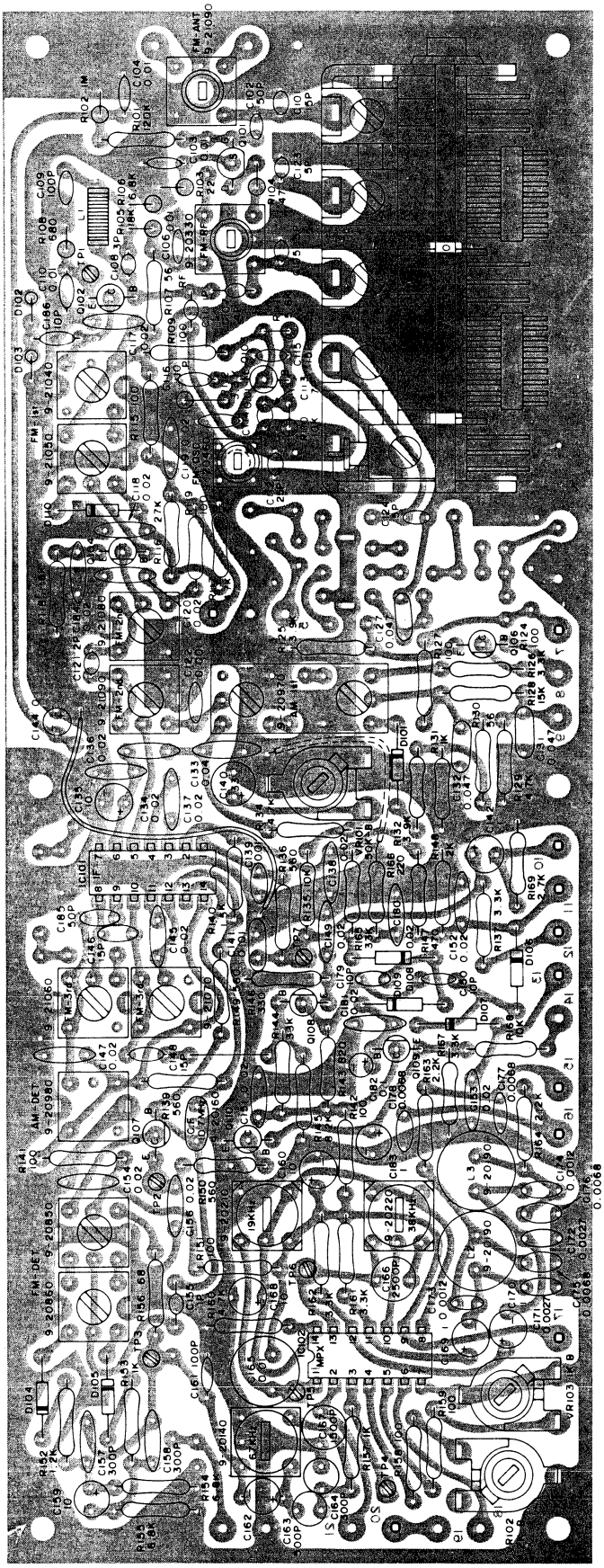
Key No.	Part No.	Description	Q'ty
RF. IF. MPX P.C.B. ASSY			
C140		Electrolytic 33μF 10V	1
C164		Styrol 300PF ±10% 35V	1
C163		Styrol 500PF ±10% 35V	1
C167		Styrol 1500PF ±10% 35V	1
C166		Styrol 2500PF ±10% 35V	1
C165		Styrol 10000PF ±10% 35V	1
C144,182		Alsicon 0.1μF ±20% 10V	2
C142,162, 169,170		Alsicon 1μF ±20% 10V	4
C103,104, 106,110, 114		Ceramic 0.01μF +80 −20% 25V	5
C118,119, 120,117, 134,136, 137,138 151,145, 147,149, 152,153, 154,156, 184,180, 181		Ceramic 0.02μF +80 −20% 25V	19
C133		Ceramic 0.04μF +80 −20% 25V	1
		RESISTORS	
R103		Carbon 22 ohm ±10% 1/4W	1
R104		Carbon 47 ohm ±10% 1/4W	1
R107,130		Carbon 56 ohm ±10% 1/4W	2
R156		Carbon 68 ohm ±10% 1/4W	1
R109,115, 119,127, 141,142, 151,158, 159		Carbon 100 ohm ±10% 1/4W	9
R166		Carbon 220 ohm ±10% 1/4W	1
R146		Carbon 330 ohm ±10% 1/4W	1
R147		Carbon 470 ohm ±10% 1/4W	1
R136,139, 149,150		Carbon 560 ohm ±10% 1/4W	4
R108		Carbon 680 ohm ±10% 1/4W	1
R131,153, 157		Carbon 1K ohm ±10% 1/4W	3
R152		Carbon 1.2K ohm ±10% 1/4W	1
R140		Carbon 1.5K ohm ±10% 1/4W	1
R118		Carbon 1.8K ohm ±10% 1/4W	1
R148		Carbon 2K ohm ±10% 1/4W	1
R163, 164		Carbon 2.2K ohm ±10% 1/4W	2
R169		Carbon 2.7K ohm ±10% 1/4W	1
R112		Carbon 3.3K ohm ±10% 1/4W	1
R126, 137,161, 162,167		Carbon 3.3K ohm ±10% 1/4W	5
R125,132		Carbon 3.9K ohm ±10% 1/4W	2
R117,129, 134,160		Carbon 4.7K ohm ±10% 1/4W	4
R111		Carbon 5.6K ohm ±10% 1/4W	1
R106		Carbon 6.8K ohm ±10% 1/4W	1
R154,155		Carbon 6.8K ohm ±10% 1/4W	2
R145		Carbon 8.2K ohm ±10% 1/4W	1
R110		Carbon 10K ohm ±10% 1/4W	1
R135,168		Carbon 10K ohm ±10% 1/4W	2
R128		Carbon 15K ohm ±10% 1/4W	1
R105		Carbon 18K ohm ±10% 1/4W	1
R116		Carbon 27K ohm ±10% 1/4W	1
R144,165		Carbon 33K ohm ±10% 1/4W	2
R101		Carbon 120K ohm ±10% 1/4W	1
R102		Carbon 1M ohm ±10% 1/4W	1
R143		Carbon 820 ohm ±10% 1/4W	1

Notes: 1. Parts orders must contain Model Number, Part Number and Description.
2. Unless otherwise noted, component parts indicated by parentheses in the column Q'ty are not available.
3. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

RF. IF. MPX. P.C.B. BOTTOM VIEW



RF. IF. MPX. P.C.B. TOP VIEW



CLASSIFICATION	IC101	IC102	Q101	Q102	Q103	Q104	Q105	Q106	Q107	Q108	Q109 , Q110	D101 ~ D109	D110
	LA1201	LA3300	2SK41	2SC668	2SC930	2SC930	2SC536	2SC929	2SC930	2SC930	2SC537	1S188 FM	DS-442
RANK			F	D , E	D , E	D	D , E	D , E	D , E	D	D , E		

PARTS LIST

Key No.	Part No.	Description	Q'ty
EQUALIZER P.C.B. ASSY			
112	131 0 4001 39000	Equalizer P.C.B. Assy	1
		CAPACITORS	
C207,208		Ceramic 50PF ±10% 50V	2
C205,206		Ceramic 180PF ±10% 50V	2
C215,216		Ceramic 470PF ±10% 50V	2
C219,220		Mylar 0.0033μF ±10% 50V	2
C217,218		Mylar 0.01μF ±10% 50V	2
C211,212		Electrolytic 10μF 25V	2
C209,210		Electrolytic 33μF 10V	2
C203,204		Electrolytic 47μF 25V	2
C221		Electrolytic 220μF 25V	1
C201,202		Alsicon 0.47μF ±20% 10V	2
C213,214		Alsicon 0.47μF ±20% 25V	2

Key. No.	Part No.	Description	Q'ty
EQUALIZER P.C.B. ASSY			
		RESISTORS	
R209,210		Carbon 470 ohm ±10% 1/4W	2
R225		Carbon 560 ohm ±10% 1/4W	1
R215,216		Carbon 1.5K ohm ±10% 1/4W	2
R203,204		Carbon 2.7K ohm ±10% 1/4W	2
R219,220		Carbon 3.3K ohm ±10% 1/4W	2
R213,214		Carbon 18K ohm ±10% 1/4W	2
R223,224		Carbon 22K ohm ±5% 1/4W	2
R205,206		Carbon 39K ohm ±10% 1/4W	2
R201,202		Carbon 56K ohm ±10% 1/4W	2
R217,218		Carbon 100K ohm ±10% 1/4W	2
R207,208		Carbon 120K ohm ±10% 1/4W	2
R221,222		Carbon 270K ohm ±5% 1/4W	2
R211,212		Carbon 330K ohm ±10% 1/4W	2
		SEMICONDUCTORS	
Q201,202, 203,204	203 5 5100 69369	Transistor 2SC 693 F-1	4

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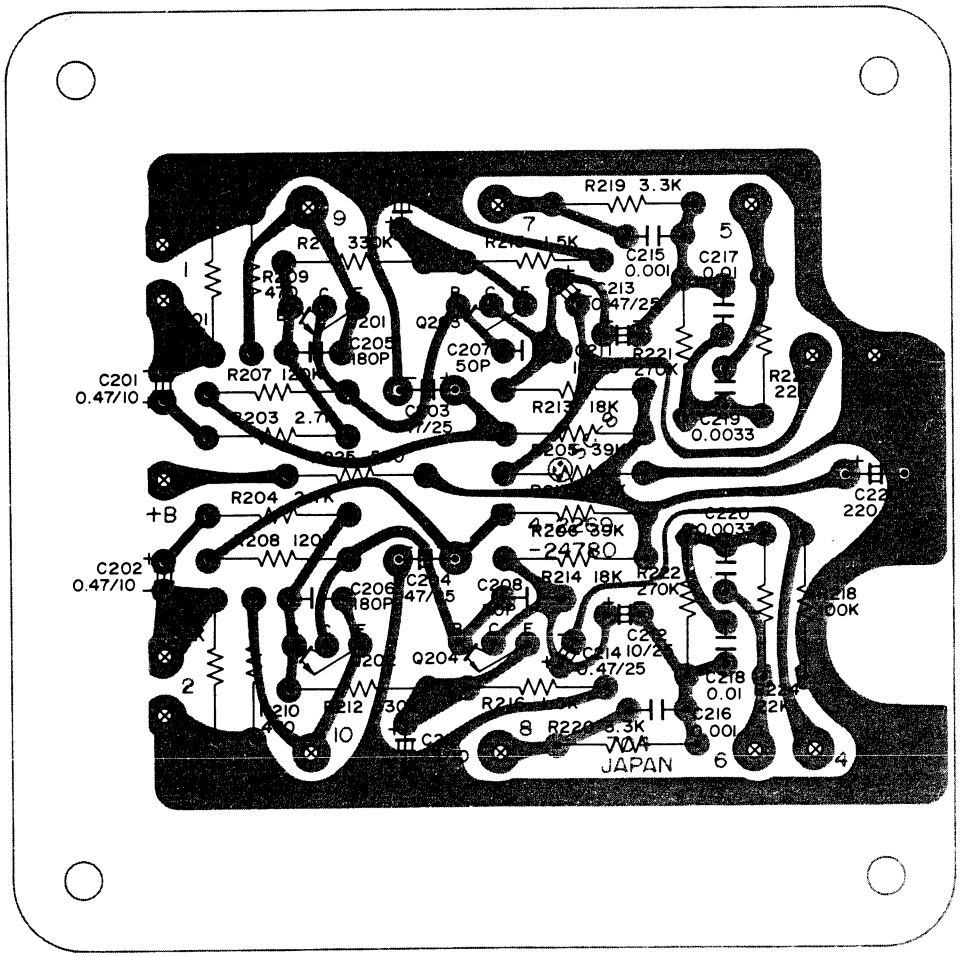
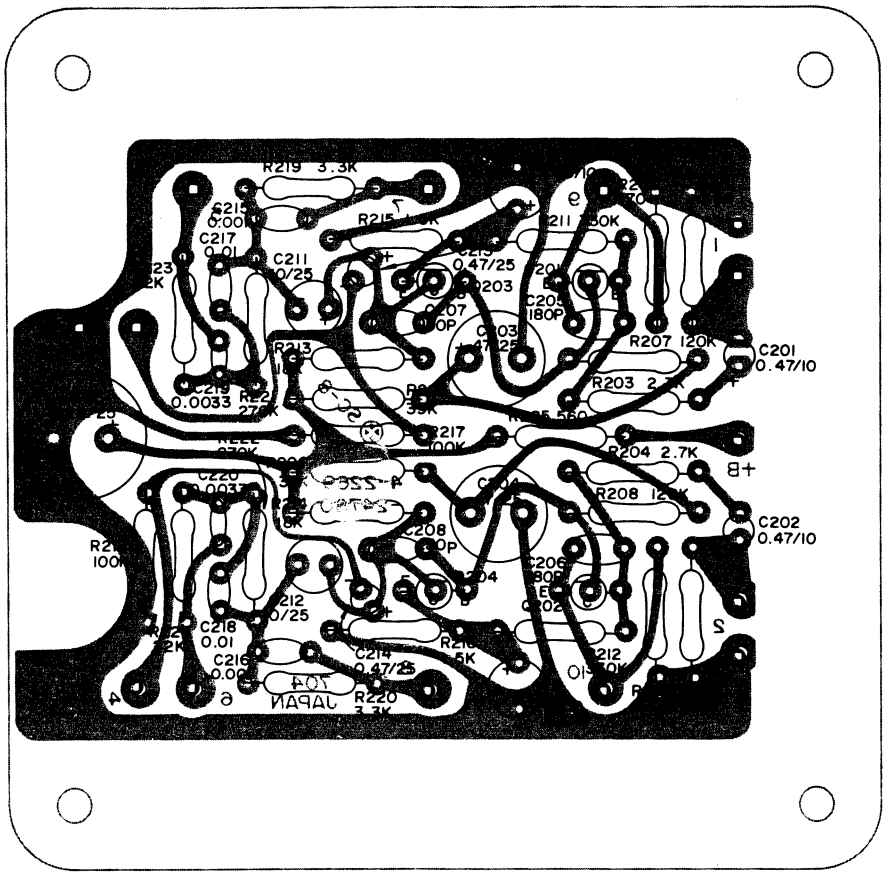
3. Ordering quantity of resistors and screws must be multiple of 10 pcs.

EQUALIZER P.C.B. ASSY BOTTOM VIEW



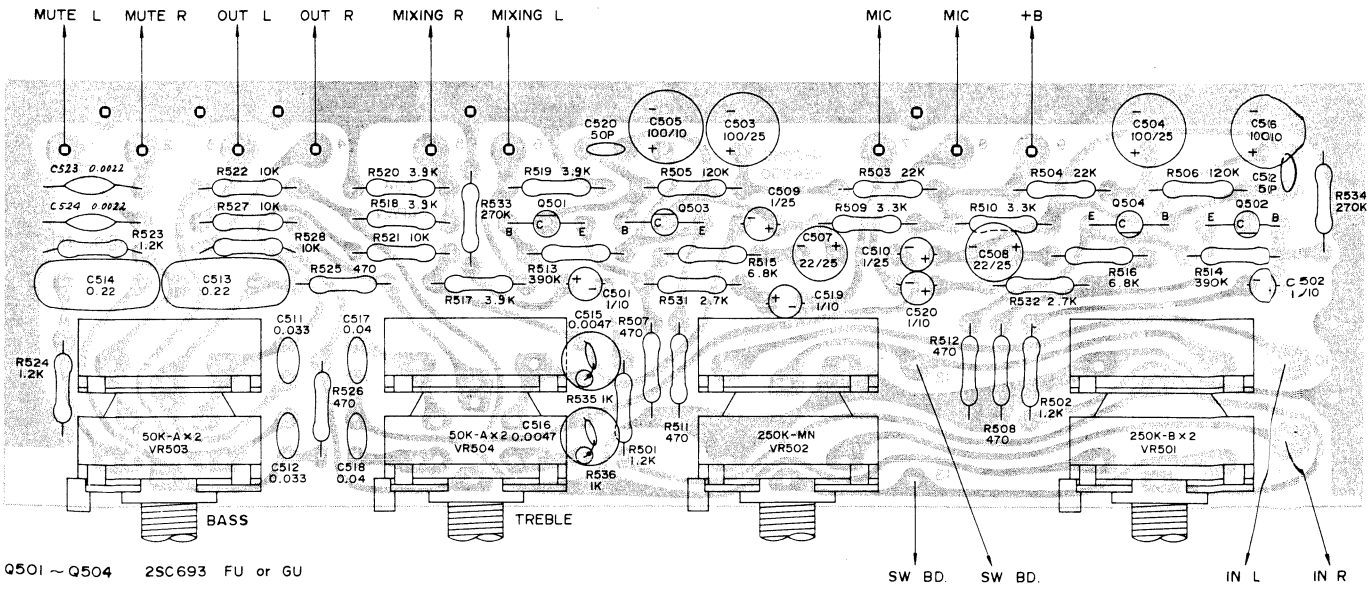
Q201 ~ Q204 2SC693 FL or 2SC1312 F

EQUALIZER P.C.B. ASSY TOP VIEW



Q201 ~ Q204 2SC693 FL or 2SC1312 F

PRE AMP P.C.B. ASSY TOP VIEW



Q501 ~ Q504 2SC693 FU or GU

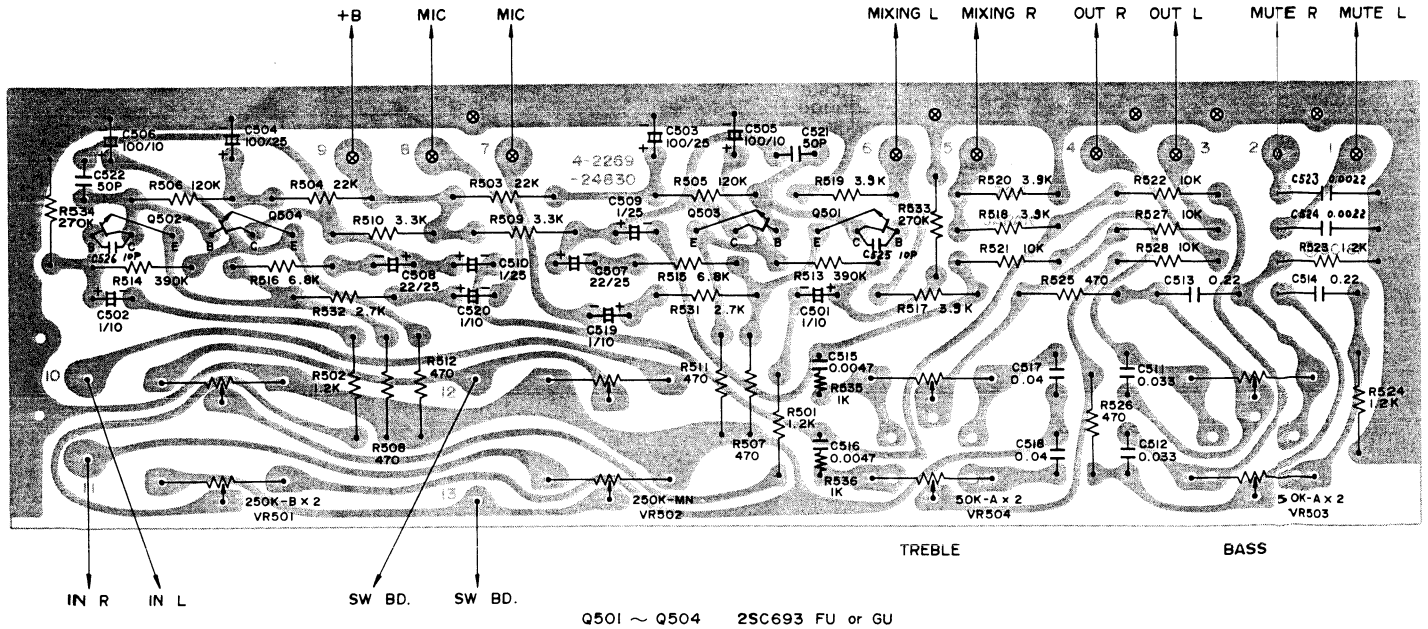
PARTS LIST

Key No.	Part No.	Description		Q'ty
PRE AMP. P.C.B. ASSY				
113	131 0 4001 39202	Pre Amp P.C.B. assy		1
VR501	4 2229 23460	VR 250K-B Volume		1
VR502	4 2229 23470	VR 250K-MN Balance		1
VR503,504	4 2229 23480	VR 50K-A x 2, Bass, Treble		2
		CAPACITORS		
C525,526		Ceramic 10PF	±10% 50V	2
C521,522		Ceramic 50PF	±10% 50V	2
C515,516		Mylar 0.0047μF	±20% 50V	2
C511,512		Mylar 0.033μF	±20% 50V	2
C517,518		Mylar 0.04μF	±20% 50V	2
C513,514		Mylar 0.22μF	±20% 50V	2
C509,510		Electrolytic 1μF	25V	2
C507,508		Electrolytic 22μF	25V	2
C505,506		Electrolytic 100μF	10V	2
C503,504		Electrolytic 100μF	25V	2
C501,502 519,520		Alsicon 1μF	±20% 10V	4
C523,524		Mylar 0.0022μF	±20% 50V	2

Key No.	Part No.	Description		Q'ty
PRE AMP. P.C.B. ASSY				
		RESISTORS		
R507,508, 511,512, 525,526		Carbon 470 ohm	±10% 1/4W	6
R535,536		Carbon 1K ohm	±10% 1/4W	2
R501,502, 523,524		Carbon 1.2K ohm	±10% 1/4W	4
R531,532		Carbon 2.7K ohm	±10% 1/4W	2
R517,518, 519,520,		Carbon 3.9K ohm	±10% 1/4W	4
R509,510		Carbon 3.3K ohm	±10% 1/4W	2
R515,516		Carbon 6.8K ohm	±10% 1/4W	2
R521,522 527,528		Carbon 10K ohm	±10% 1/4W	4
R503,504		Carbon 22K ohm	±10% 1/4W	2
R505,506		Carbon 120K ohm	±10% 1/4W	2
R533,534		Carbon 270K ohm	±10% 1/4W	2
R513,514		Carbon 390K ohm	±10% 1/4W	2
		SEMICONDUCTORS		
Q501,502, 503,504	203 5 5100 69362	Transistor 2SC 693 (FU) or (GU)		4

Notes: 1. Parts orders must contain Model Number, Part Number and Description.
2. Unless otherwise noted, component parts indicated by parentheses in the column Q'ty are not available.
3. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

PRE AMP P.C.B. BOTTOM VIEW



PARTS LIST

Key. No.	Part No.	Description	Q'ty
MAIN AMP P.C.B ASSY			
111	131 0 4001 40000	Main Amp PCB Assy	1
		Screw, Pan Hd tapping 3 x 16	4
	131 2 6201 19200	Plate Heat Sink	1
		CAPACITORS	
C613,614		Mylar 0.1μF ±20% 50V	2
C611,612		Electrolytic 22μF 25V	2
C603,604 607,608 609,610		Electrolytic 47μF 25V	6
C605,606		Electrolytic 220μF 35V	2
C615,616		Electrolytic 1000μF 35V	2
C601,602		Alsicon 1μF ±20% 25V	2

Key. No.	Part No.	Description	Q'ty
MAIN AMP P.C.B. ASSY			
		RESISTORS	
R605,606		Carbon 10 ohm ±10% 1/4W	2
R601,602		Carbon 47 ohm ±10% 1/4W	2
R607,608		Carbon 220 ohm ±10% 1/4W	2
R603,604		Carbon 2.2K ohm ±10% 1/4W	2
		SEMICONDUCTORS	
IC601,602	206 5 6160 01610	IC STK-016	2

NOTES: 1. Part orders must contain Model Number, Part Number and Description.
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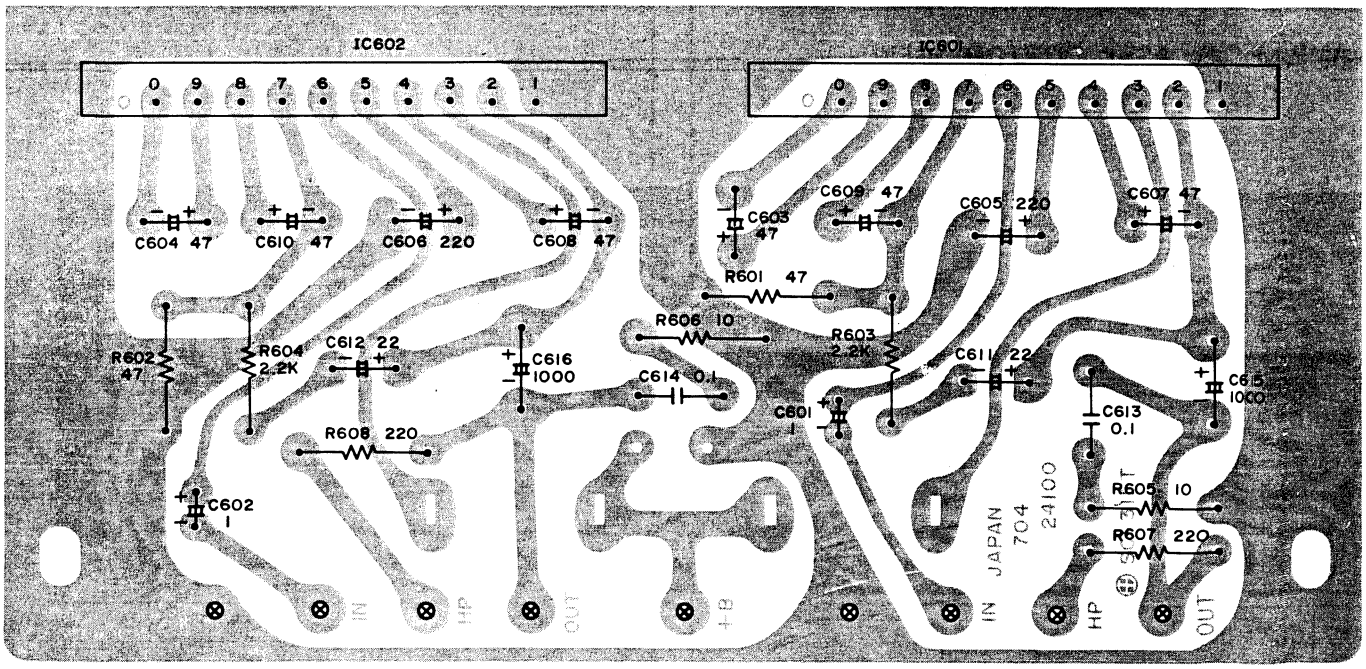
3. Ordering quantity of resistors and screws must be multiple of 10 pcs.

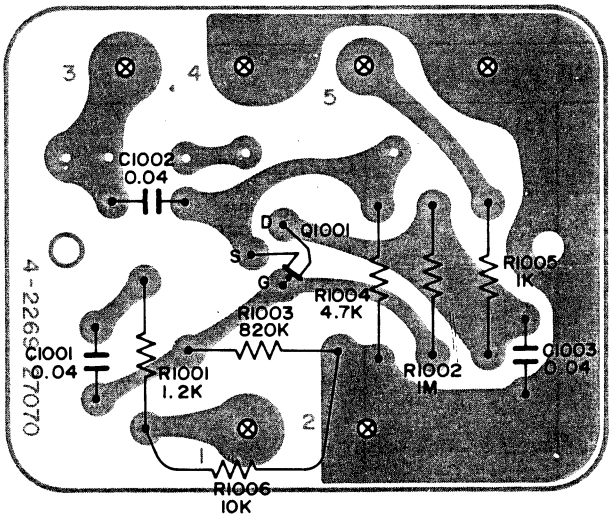
MAIN AMP. P.C.B. ASSY BOTTOM VIEW



IC601 , IC602 STK016

PARTS LIST

Ken NO.	Part No.	Description	Q'ty
RF AMP PCB ASSY			
119	131 0 4001 63300	RF Amp PCB Assy	1
		CAPACITORS	
C1001, 1002, 1003		Ceramic 0.04μF 50V +80% -20%	3
		RESISTORS	
R1005		Carbon 1K ohm 1/4W ±10%	1
R1001		Carbon 1.2K ohm 1/4W ±10%	1
R1004		Carbon 4.7K ohm 1/4W ±10%	1
R1006		Carbon 10K ohm 1/4W ±10%	1
R1003		Carbon 820K ohm 1/4W ±10%	1
R1002		Carbon 1M ohm 1/4W ±10%	1
		SEMICONDUCTORS	
Q1001	203 5 6500 04160	Transistor 2SK 41	1



Q1001 2SK41

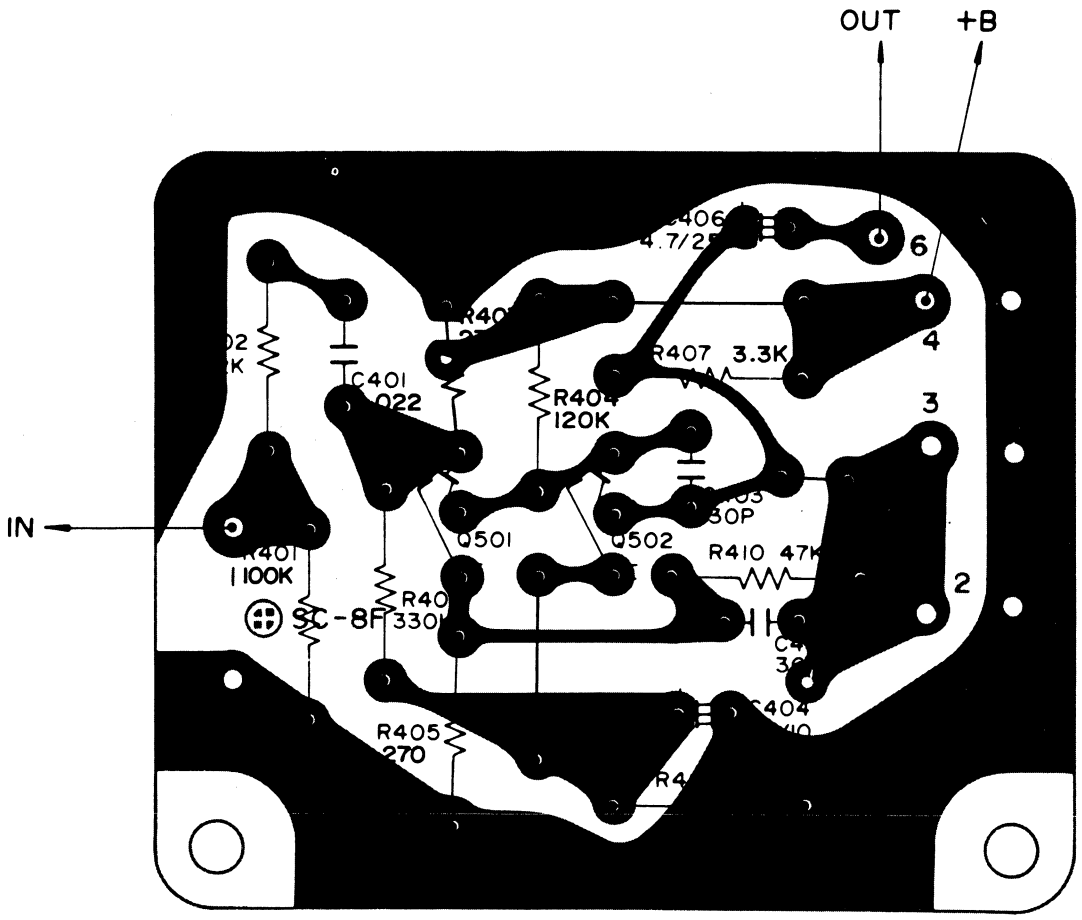
PARTS LIST

Key No.	Part No.	Description	Q'ty
MIC AMP. P.C.B. ASSY			
116	131 0 4001 39501	Mic Amp P.C.B. assy	1
		CAPACITORS	
C403		Ceramic 30PF ±10% 50V	1
C407		Ceramic 300PF ±10% 50V	1
C401		Mylar 0.022μF ±20% 50V	1
C406		Electrolytic 4.7μF 25V	1
C404		Electrolytic 33μF 10V	1

Key No.	Part No.	Description	Q'ty
MIC AMP. P.C.B. ASSY			
		RESISTORS	
R405		Carbon 270 ohm ±10% 1/4W	1
R409		Carbon 470 ohm ±10% 1/4W	1
R402		Carbon 2.2K ohm ±10% 1/4W	1
R407		Carbon 3.3K ohm ±10% 1/4W	1
R410		Carbon 47K ohm ±10% 1/4W	1
R401		Carbon 100K ohm ±10% 1/4W	1
R404		Carbon 120K ohm ±10% 1/4W	1
R403		Carbon 270K ohm ±10% 1/4W	1
R406		Carbon 330K ohm ±10% 1/4W	1
		SEMICONDUCTORS	
Q401,402	203 5 5100 69362	Transistor 2SC 693 (FU) or (GU)	2

Notes: 1. Parts orders must contain Model Number, Part Number and Description.
2. Unless otherwise noted, component parts indicated by parentheses in the column Q'ty are not available.
3. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

MIC AMP. P.C.B. BOTTOM VIEW



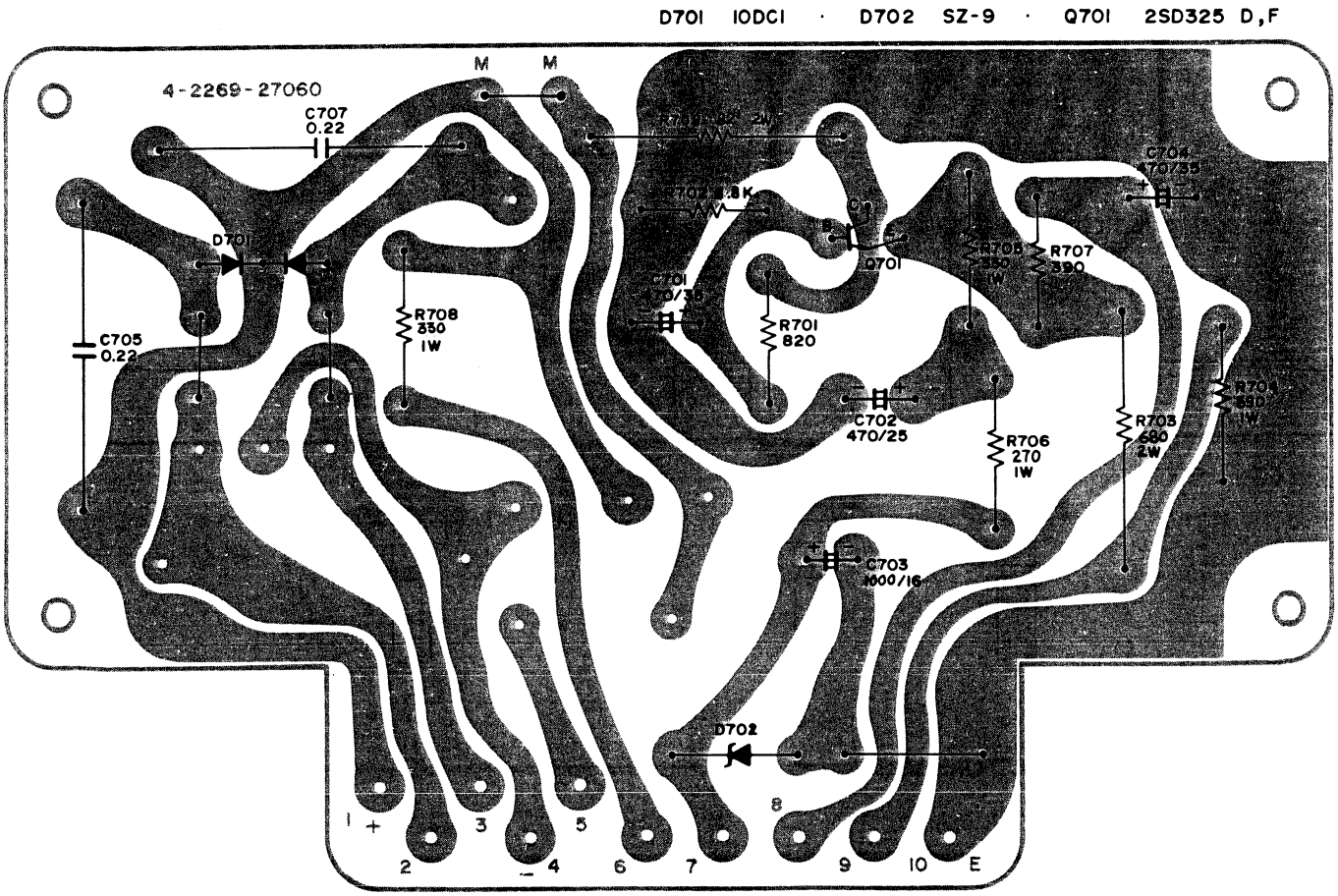
Q501 , Q502 2SC693 FU or GU

PARTS LIST

Key No.	Part No.	Description	Q'ty
POWER SUPPLY P.C.B. ASSY			
114	131 0 4001 63200	Power supply P.C.B. assy	1
		CAPACITORS	
C705,706		MP 0.22μF 160V ±30%	2
C702		Elect 470μF 16V	1
C701,704		Elect 470μF 35V	2
C703		Elect 1000μF 16V	1
		RESISTORS	
R707		Carbon 390 ohm 1/4W ±10%	1
R701		Carbon 820 ohm 1/4W ±10%	1
R702		Carbon 6.8K ohm 1/4W ±10%	1
R709		OMF 82 ohm 2W ±10%	1
R706		OMF 270 ohm 1W ±10%	1
R705,708		OMF 330 ohm 1W ±10%	2
R704		OMF 390 ohm 1W ±10%	1
R703		OMF 680 ohm 2W ±10%	1
		SEMICONDUCTORS	
D702	202 5 3000 00910	Diode SZ-9	1
D701		Diode 10DC1	1
Q701	203 5 8120 32560	Transistor 2SD 325	1

NOTES: 1. Part orders must contain Model Number, Part Number and Description.
2. Unless otherwise noted, component parts indicated by parentheses in the column Q'ty are not available.
3. Ordering quentity of screws and/or resistors must be multiple of 10 pcs.

POWER SUPPLY P.C.B. BOTTOM VIEW



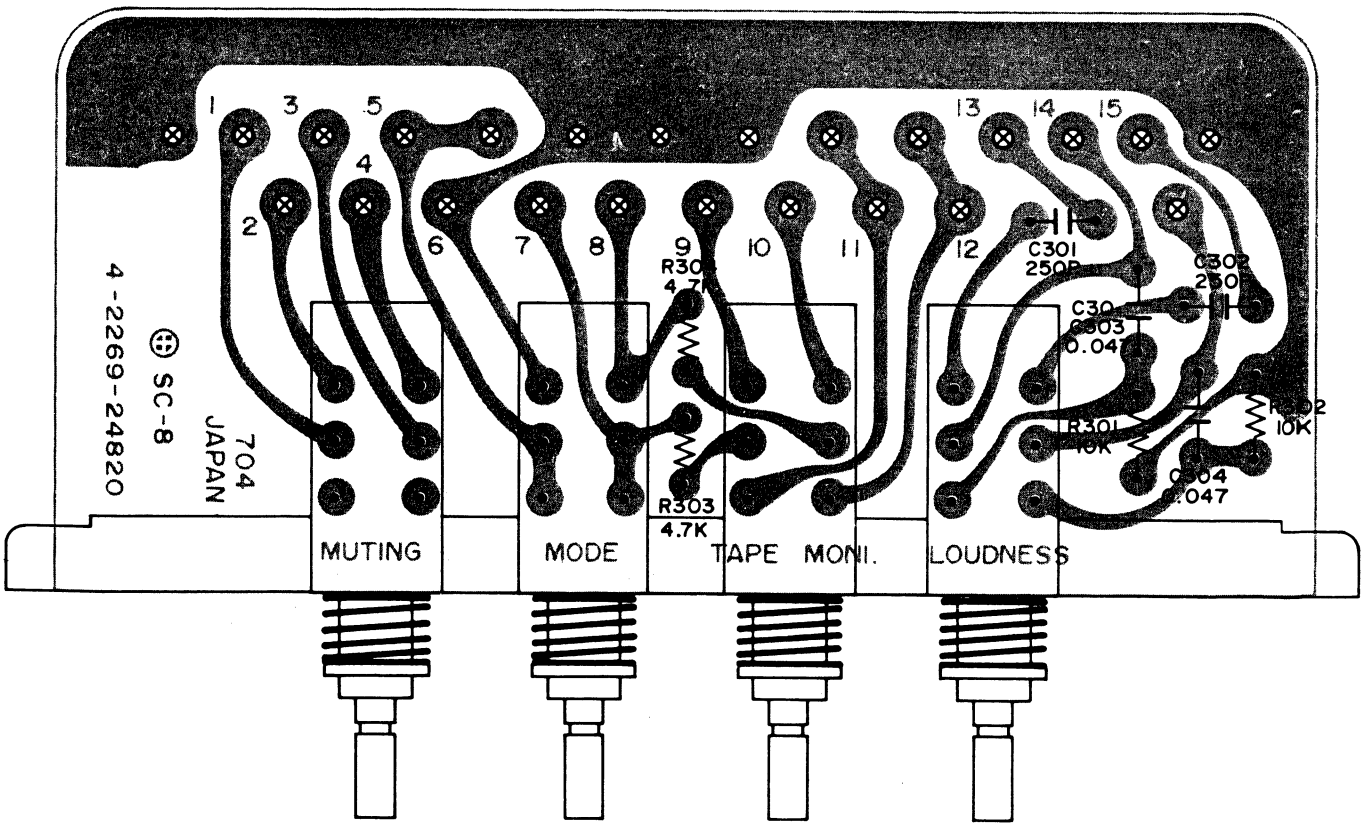
PARTS LIST

Key. No.	Part No.	Description	Q'ty
SWITCH P.C.B. ASSY			
117	131 0 4001 39100 4 2319 23120	Switch PCB Assy Switch Push (4-Key)	1 1
		CAPACITORS	
C301,302 C303,304		Ceramic 250PF ±10% 50V Mylar 0.047μF ±20% 50V	2 2
		RESISTORS	
R303,304 R301,302		Carbon 4.7K ohm ±10% 1/4W Carbon 10K ohm ±10% 1/4W	2 2

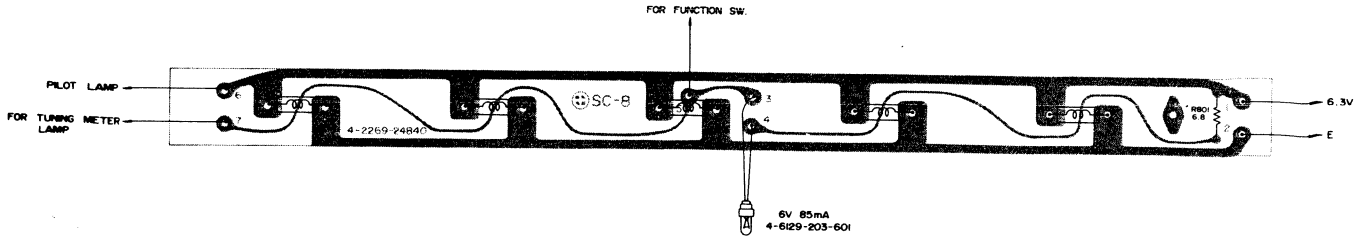
Key. No.	Part No.	Description	Q'ty
PILOT (DIAL) P.C.B. ASSY			
115	131 0 4001 39300 4 2359 20930 4 6129 20280	Pilot (Dial) PCB Assy Fuse Holder Pilot Lamp	1 10 5
		RESISTORS	
R801		Carbon 6.8ohm ±10% 1/4W	1

NOTES: 1. Part orders must contain Model Number, Part Number and Description.
2. Unless otherwise noted, component parts indicated by parentheses in the column Q'ty are not available.
3. Ordering quantity of resistors and screws must be multiple of 10 pcs.

SWITCH P.C.B. ASSY BOTTOM VIEW



DIAL LAMP P.C.B. ASSY BOTTOM VIEW

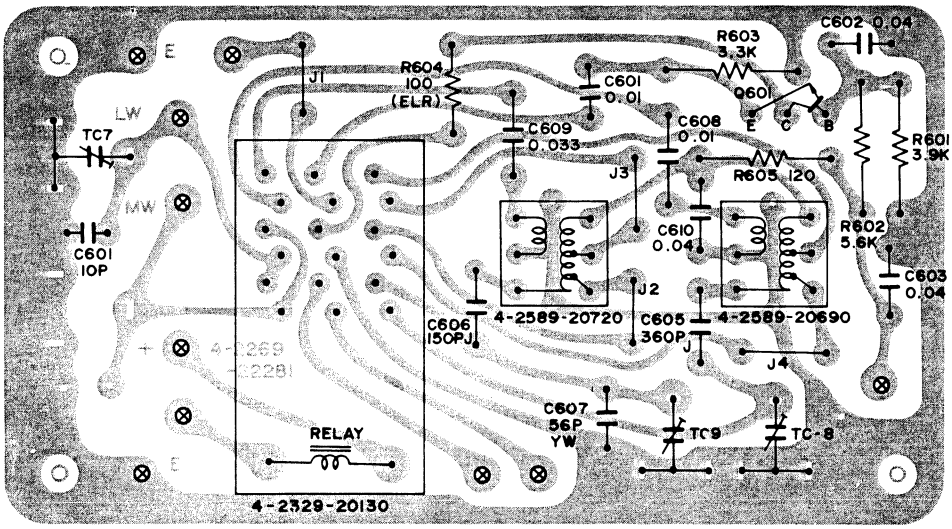


PARTS LIST

Key No.	Part No.	Description	Q'ty
AM CONVERTER PCB ASSY			
118	131 0 4001 21802	AM CONV PCB assy	1
	4 2249 20310	Variable capacitor, TC8	1
	4 2249 20440	Trimmer capacitor, TC7,9	2
	4 2329 20130	Relay, DC-24V	1
	4 2359 22070	Socket relay 20P	1
	4 2589 20690	OSC coil MW	1
	4 2589 20720	OSC coil MW	1
		CAPACITORS	
C001		Ceramic 10PF 50V ±0.25PF	1
C007		Ceramic 56PF 50V ±10%	1
C004		Mylar 0.01μF 50V ±20%	1
C009		Mylar 0.03μF 50V ±20%	1
C006		Styrol 150PF 50V ±5%	1
C005		Styrol 360PF 50V ±5%	1
C008		Ceramic 0.01μF 50V ±20%	1
C002,003 010		Ceramic 0.04μF 50V +80% -20%	3

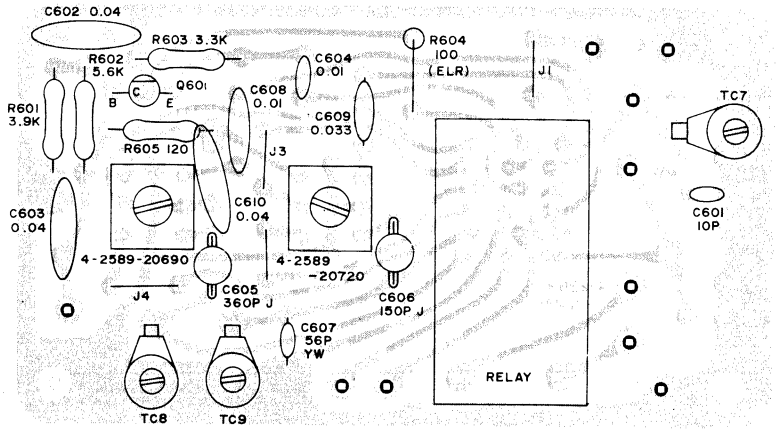
Key No.	Part No.	Description	Q'ty
AM CONVERTER PCB ASSY			
		RESISTORS	
R004		Carbon 100 ohm 1/4W ±10%	1
R-05		Carbon 120 ohm 1/4W ±10%	1
R003		Carbon 3.3K ohm 1/4W ±10%	1
R001		Carbon 3.9K ohm 1/4W ±10%	1
R002		Carbon 5.6K ohm 1/4W ±10%	1
	131 2 5107 00300	Mount electric part	1
		SEMICONDUCTORS	
TR001	203 5 5100 53640	Transistor 2SC 536	1

AM CONV. PCB BOTTOM VIEW



Q601 2SC536

AM CONV. PCB TOP VIEW



Q601 2SC536

MEMO

SCHEMATIC DIAGRAM